

In The Claims:

The following claim listing sets forth the present version of the claims after amendment, and supercedes any previous claims listing.

IN THE CLAIMS

Please amend each of pending claims 1-10 as follows:

1. (currently amended) A method for registration of a series of at least three temporally successively acquired images of an object, including transforming individual images to be registered, registered images by implementation of an individual mapping rule with respect to each individual image to be registered, and determining a similarity measure used with the mapping rule, wherein a common similarity measure of all images is used to determine individual mapping rules for the individual images to be registered.

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2. (currently amended) A method as claimed in claim 1, wherein the step of determining the mapping rules is performed iteratively in that alternately one or more mapping rules are varied, and that the similarity measure of all images is determined by means of said varied mapping rules until a given limit value or an extreme value is reached for the similarity measure.

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3. (currently amended) A method as claimed in claim 1, wherein the step of determining the mapping rules for the individual images to be registered is performed in sub-steps, in which sub-steps only a single mapping rule is varied, the similarity measured thereby, the sub-steps repeated until an optimum is found, and wherein a further optimum mapping rule is determined.

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Deleted: in that alternately in one step of the procedure each time

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4. (currently amended) A method as claimed in claim 1, wherein characteristic structures or characteristic image values in the individual images are used for the registration.

5. (currently amended) A method as claimed in claim 1, wherein the mapping rules compensate for arbitrary geometrical variations of the object, notably translations, rotations, compressions and expansions.

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6. (currently amended) A method as claimed in claim 1, used for the registration of a series of medical images of an object to be examined, notably a series of two-dimensional or three-dimensional images acquired by means of a medical imaging modality.

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7. (currently amended) A method as claimed in claim 1, used for the registration of a series of images, notably images of the brain, that have been acquired by means of functional magnetic resonance tomography.

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8. (currently amended) A device for registration of a series of at least three temporally successively acquired images of an object, comprising:

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a storage unit for storing images, and

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an arithmetic unit for determining individual mapping rules for the transformation of individual images to be registered into registered images, wherein a similarity measure is used for the determination of the mapping rules, and wherein the arithmetic unit uses a common similarity measure of all individual images to determine the mapping rules for the registration of the images.

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9. (currently amended) A device for the temporally successive acquisition of a series of medical image data of an examination zone of an object to be examined, comprising a registration device as set forth in claim 8.

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10. (currently amended) A computer program readable medium for receiving, storing and transferring a set of computer readable instructions, which may be used to cause a processor to implement a method for the registration of a series of at least three temporally successively acquired images of an object, including transforming the individual images to be registered into registered images using an individual mapping rule to register each image for registration, and including that a similarity measure is used to determine the mapping rule, wherein a common similarity measure of all images is used to determine the mapping rules for each image for registration, and including controlling a device for registration of the series of the acquired images, which device includes a storage unit for storing images and an arithmetic unit for

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determining the individual mapping rules for the transformation of individual images to be registered into the registered images, the common a similarity measure used for determining the mapping rules, and wherein the arithmetic unit maintains that a common similarity measure of all images is used to determine the mapping rules for the images to be registered.

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